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ABSTRACT

Using aspects of the Children's Television Workshop procedure, a theoretical evaluation model is developed which may be used by teachers for previewing instructional television (ITV) programs. Based on discrepancy between teacher goals and expectations, program goals and purposes, and student attention and receptivity, the model assumes that the likelihood of successful viewing of ITV is inversely related to the amount of discrepancy. The model has been synthesized into an evaluation form consisting of a series of semantic differential scales grouped according to teacher, program, and student components. The more numerically equivalent the section averages, the less discrepancy can be expected between components, thus providing the teacher with an indication of the program's success. (Author/JEG)

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A DISCREPANCY MODEL FOR ITV PROGRAM EVALUATION: AN INSTRUMENT FOR TEACHERS

by

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AN INSTRUMENT FOR TEACHERS

Formative Evaluation

Palmer (1974) developed a theory of presentational learning which he applied to instrucational television (ITV). ITV is a presentation medium, reception by one party of a signal presented remotely by another. This definition seeks principles of presentational learning appropriate to particular educational goals, audiences, and production techniques. Formative research by the Children's Television Workshop (CTW) applies this theory of presentational learning to the development and formative evaluation of ITV programming, and in such a way has become the exemplary model for ITV evaluation.

Formative evaluation of ITV programming has gained wide acceptance in the field, following years of inconclusive research comparing ITV programming to traditional instruction or to other such inoperative constructs. Application of audience and content research analysis using expert evaluators and validation of program sequences using psychological instruments and demographic data has become instrumental in the development of ITV programming today, expecially as is practice at CTW.

These theoretically enigmatic conceptualizations of the mediation process need to be distilled into useful procedures for the classroom teacher. A simplified method for evaluating the potential usefulness and effectiveness of ITV programming by the classroom teacher should at least be premised on some proven evaluation techniques.

The teacher cannot afford to assume that any or all of these procedures were applied to the development of any given ITV program; more frequently than not, they haven't been.

Sophisticated formative evaluation procedues, such as the multi-variate statistical techniques suggested by Williams ans Stanford (1976) are appropriate for institutional, programmatic research, but what about the individual teacher at the classroom level? How do they determine appropriateness and applicability for viewing and effect on students without employing complex, time-consuming evaluative techniques. The use of questionnaires, as suggested by Forrester and Zakia (1976), is far too obtrusive and cumbersome a measure in the classroom. Teachers seldom have the time or statistical skills necessary for interpreting such instruments. Likewise, most teachers lack the expertise or experience with the medium to evaluate production techniques, such as Shively (1975) accomplished with expert raters. However, some of the evaluative techniques suggested above may be synthesized into a simplistic summative evaluation procedure that may hopefully help the teacher answer the only relevant question for them: "Will it work with my students?" A simple model is needed to help teachers during previewing (if time permits) or during and after class viewing to predict or determine the program's effectiveness. While general classroom experience has been proven to be a more important characteristic in making judgements about ITV effectiveness, (over ITV course preparation or even ITV class experience) (Lucas, 1974), beginning or inexperienced teachers interested in utilizing ITV would benefit from applying such a model. It is precisely that population that more definitely requires such a structured instrument.

The Model

It is assumed that successful utilization of ITV requires some interaction between three major components: students, teachers, and the television program.

It is important to note that they interact from independent contexts, each with different goals and perspectives. The ITV program is designed, produced, and distributed independent of teachers' goals, needs or perceptions. The teacher, in turn, operates from an independent, authoritarian or facilitative context with respect to the students, who operate in the context of their own social and educational needs. ITV utilization occurs without prior communication between the necessary components for its success. Its use, more frequently than not, is completely a priori.

The model herein borrows from Fuller and Manning (1973) in the conceptualization of components in a discrepancy arrangement (see Figure 1). Each of these components represents a diversity of needs, perceptions, goals, and purposes which affect the way in which it will interact with the other components. The linear distance between the components represents the amount of discrepancy between them. The greater the linear distance between them, the greater is the discrepancy between components, and so on.

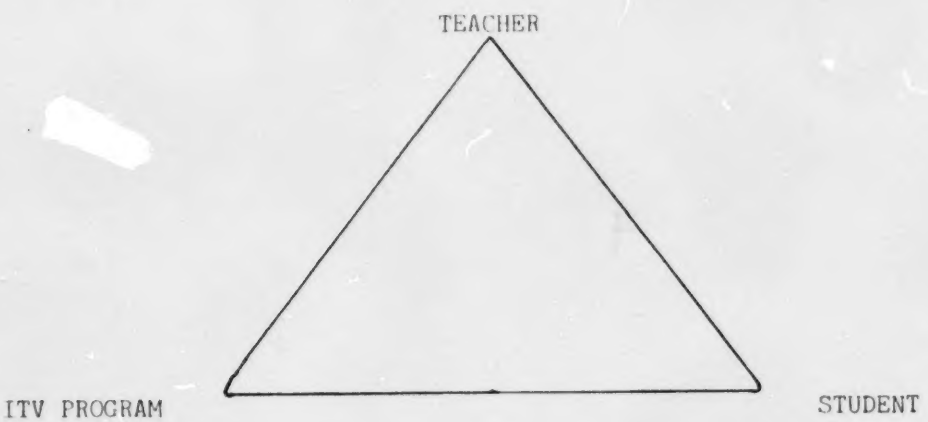

Figure 1. Basic Conceptualization of ITV Learning Process

An analysis of the discrepancies that do exist between these components can occur on various levels or dimensions with respect to different dimensions

of the teaching - learning process. For instance, effectiveness of ITV programming is a function of discrepancies that exist between the teachers learning goals, the stated objectives of the program, and student reception of program content (see Figure 2). If the stated objectives of the program are different from or not fulfilled by the message transmitted, a discrepancy exists that affects learning. Likewise, if the teacher's goals or intentions of student performance differ from the message actually perceived or with the message they expected to be taught by the program, the resultant discrepancies will reduce learning.

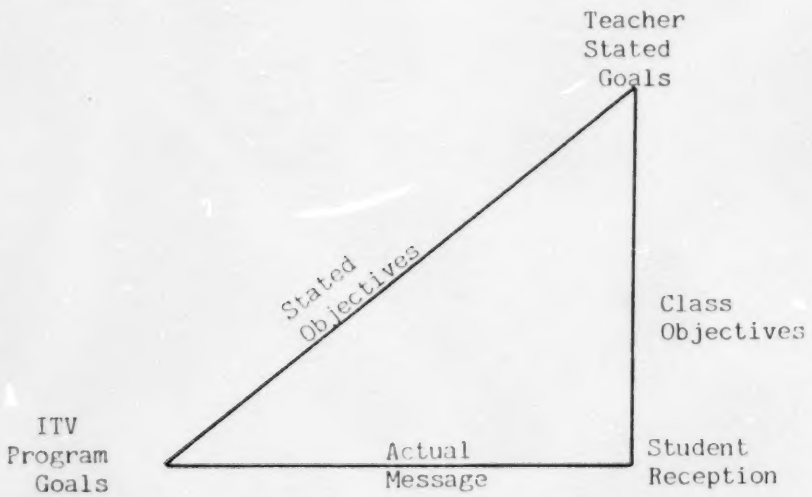

Figure 2. Discrepancy of Goals

In analyzing the levels or dimensions of student performance, teacher activity, and program attitudes (see Figure 3), it is obvious that each of the dimensions of each of the other components. The formulations labelled along the sides of the truangle represent the nature of the interaction between the two connecting components. The intentional formulations delineate the interaction of teacher and student, with the implicit and explicit (objectives) intentions of student learning. Expectational formulations project

teacher expectancies about program content, goals, and effectiveness. Mediational formulations represent those attributes and characteristics of the mediation process that result in learning.

With the large number of possible combinations between the components, discrepancies occur, the line segment connecting the discrepent components would be longer or shorter than the other line segments, yielding an un-equilateral triangle. Accepting this as a premise, the goal of the technique should be to reduce as much discrepancy as possible, i.e., to create a small, equilateral triangle.

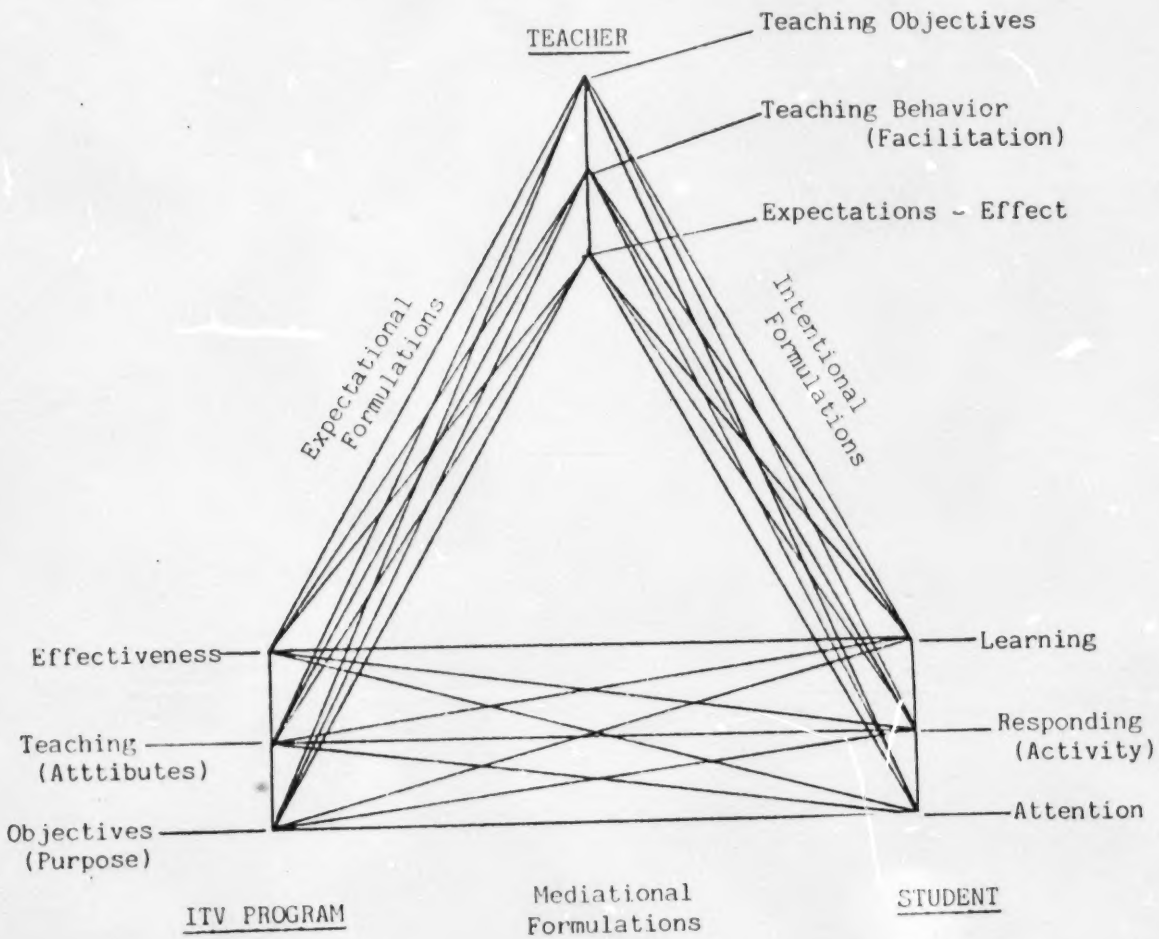

Figure 3. Discrepancy Model of ITV Process

Implementation

The model presented herein tends to be theoretical, so it is essential that it be synthesized into a practical working procedure for teachers. It should be noted that in order to work maximally, ITV programming should be previewed. Previewing should be an intergral part of the utilization process. This model will be most effectively employed as a decision-making mechanism during preview, so that students will not be exposed to superfluous, negative or inappropriate instruction. The reduction of discrepancies between teacher goals and perceptions and ITV program content and technique can best be reconciled at this point. It is understood, however, that demands on teacher time or the lack of availability of broadcast programming for preview may prevent this important step. The evaluation procedure can be accomplished during calss viewing, and the results generalized to other programs in the series.

Successful implementation of this model depends upon consulting teacher's guides. Predetermination of the program's objectives, its content, information related to format and technique, and any validation information are essential to determining if and where any discrepancies exist. Almost all breadcast ITV programming and videotaped series are accompanied by teacher's guides. Procurement of these from the network that broadcasts the programs should occur on a continuing basis, i.e., each time a new program or series is announced, the teahcer's guides and accompanying information should be solicited by the school librarian or media specialist. In addition to program objectives and purpose, valuable suggestions concerning follow-up or pre-program activities that will enhance the effectiveness of the program are included in the guide.

Given the teacher's guide and the ITV program, the teacher can then apply the model to evaluate the program. For this purpose, the expectational, intentional, and mediational formulations have been converted into various observable

criteria (see Figure 4). The criteria stated are derived from numberous research findings (especially those from the Children's Television Workshop) and ITV production and utilization experience. For the convenience of the teacher, these criteria have been converted into a series of short semantic differential

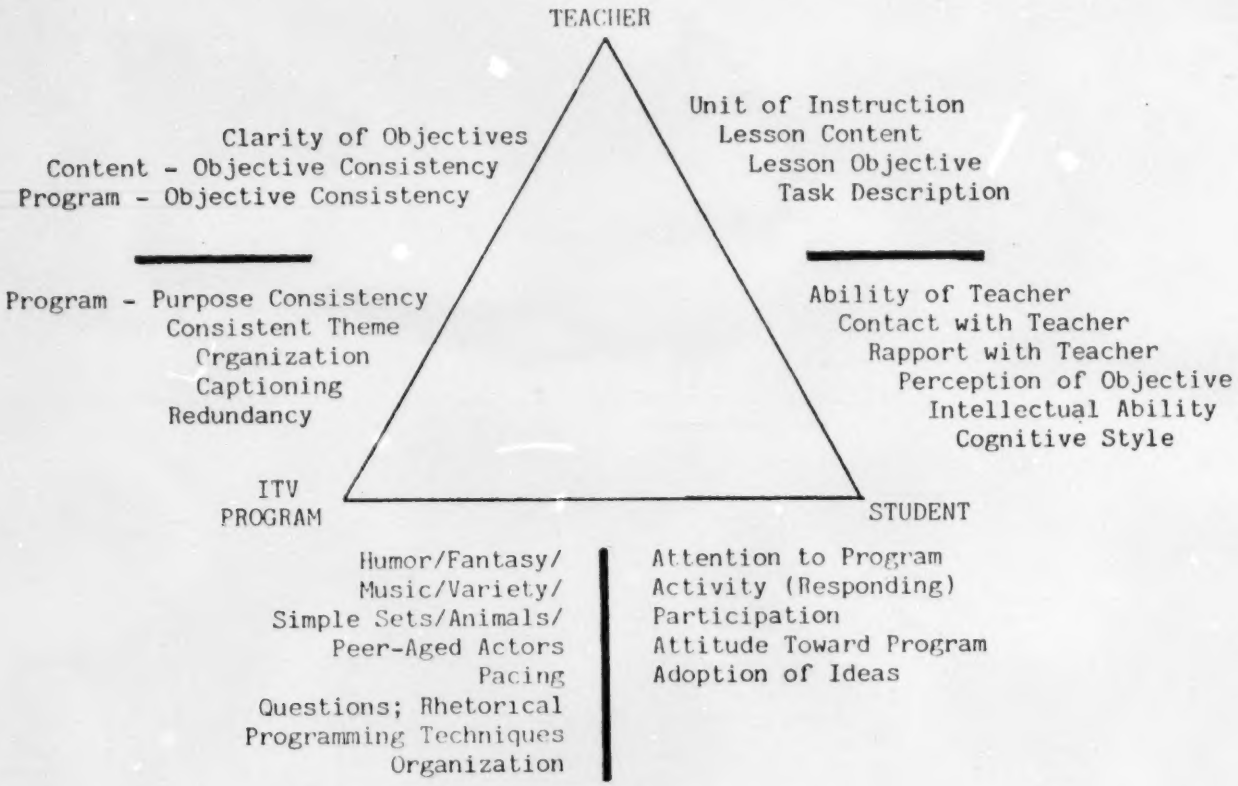

Figure 4. Criterial Evaluation Model

scales and assembled on an evaluation form (see Figure 5) for use in evaluating tapes. Thus, the theoretical model is distilled into a working instrument. For each program, the teacher should complete the evaluation form, which includes a statement of his/her instructional objective, and the semantic differentials regarding the ITV program's ability to facilitate that objective and a description of student viewing behavior. The teacher should begin by writing the lesson objective and classifying the task involved as the learning of a fact, concept, principle, procedure, or a change of attitudes/values. Sections of the scale

Figure 5. ITV Teacher Evaluation Form

Program Title or Number _____ Series Name _____ Date _____

I. 1. a. Lesson Objective: _____

_____

b. Task Description: _____

2. Clarity of Objective:	Clear	1 2 3 4 5	Not Discernable
3. Appropriateness to Unit of Instruction:	Appropriate	1 2 3 4 5	Inappropriate
4. Meaningfulness of Lesson Objective:	Important	1 2 3 4 5	Irrelevant

Total Points _____ ÷ 3 = _____

II. Student Viewing Behavior

1. Apparent Involvement with Program:	Active	1 2 3 4 5	Passive
2. Student Attention Level:	Paying Close Attention	1 2 3 4 5	Restless
3. Voluntary Selection:	Most Enjoyable Learning Experience	1 2 3 4 5	Students Would Prefer Other Activity
4. Did Students Give Answers Out Loud:	Frequently	1 2 3 4 5	Never
5. Expected Contact with Teacher (after lesson):	Extensive	1 2 3 4 5	Infrequent

Total Points _____ ÷ 5 = _____

III. Student Performance

1. Did Students Understand Objective:	Complete Understanding	1 2 3 4 5	Did Not Know What Was Expected of Them
2. After Watching Program:	Students Could Accomplish Objective	1 2 3 4 5	Students Could Not Accomplish Objective
3. Did Students Apply Lesson Content Anywhere:	Yes	1 2 3 4 5	No
4. Did Students Believe Program:	Acceptance of Program	1 2 3 4 5	Skeptical
5. If Test (Quiz) Given, Performance:	High Level	1 2 3 4 5	Low Level

Total Points _____ ÷ 5 = _____

IV. ITV Program Purpose

1. Program Content:	a.	Similar to Lesson Objective	1	2	3	4	5	Different From Lesson Objective
	b.	Similar to Stated Goal (Objective) for Program	1	2	3	4	5	Inconsistent With Stated Program Goal
	c.	Explicitness	1	2	3	4	5	Unclear
2. Program Theme:		Clear	1	2	3	4	5	Inconsistent

Total Points _____ ÷ 4 = _____

V. ITV Program Attributes

1. Redundancy of Important Points:	Repeated Frequently	1	2	3	4	5	Never Repeated
2. Relevant Instructional Prompts, Cues Used:	Frequently	1	2	3	4	5	Never
3. Rhetorical Questions:	Used Frequently	1	2	3	4	5	Never Used
4. Inserted Questions:	Used Frequently	1	2	3	4	5	Never Used
5. Reinforcement or Feedback:	Followed Questions	1	2	3	4	5	Never Followed
6. Production Techniques:	Appropriate for Age Level	1	2	3	4	5	Too Juvenile or Too Advanced
7. Primary Presentation Technique:	Dramatic or Visualized	1	2	3	4	5	Lecture
8. Pacing:	Lively	1	2	3	4	5	Dull
9. Overall Appeal:	Humorous, Happy	1	2	3	4	5	Dull, Uninviting
10. Types of Sequences Used Throughout Program:	Variety	1	2	3	4	5	Same Format
11. Music:	Used Frequently	1	2	3	4	5	Never Used
12. Peer-Aged Actors Used:	Frequently	1	2	3	4	5	Not at All
13. Animation Used:	Frequently	1	2	3	4	5	Never

Total Points _____ ÷ 13 = _____

Section Averages: I_____ II_____ III_____ IV_____ V_____

represent the formulations presented in the conceptual model. These conceptualize the interaction of the teacher and student with the ITV program. Discrepancies are determined by averaging the semantic differential values for each section and comparing the averages. If any of these averages differ by two or more points from the rest, serious consideration of that discrepancy is in order. If two or more categories differ by two or more points from the rest, the ITV program probably was not successful and other programs in the series (if it is part of a series) should be very suspect. If another program in the series yields similar results, the series should be regarded as inappropriate and not used.

The techniques and criteria reported herein are based on research and theory fundamental to instructional television. It is for the present intended to be a conceptual model for classroom ITV evaluation. Likewise, it is not intended to entail sophisticated formative evaluation techniques such as those employed by CTW (Palmer, 1974). The validity of this model can be ascertained through empirical procedures, which are currently being planned. Correlating teacher's evaluations using this model with student performance may reverse the findings of Lucas (1974) and prove this evaluation tool to be a simplistic method for the classroom teacher, regardless of experience, to evaluate the potential effectiveness of ITV programs.

References

Forrester, T. C. and Zakia, R. D. Evaluation of televised instruction. Audiovisual Instruction, 1972, 17 (12), 14-16.

Fuller, F. F. and Manning, B. A. Self-confrontation reviewed: A conceptualization for video playback in teacher education. Review of Educational Research, 1973, 43, 469-528.

Lucas, R. J. The relationship of training and experience variables to teacher's skill in judging the effectiveness of ITV programs. AV Communication Review, 1974, 22, 79-80.

Palmer, E. L. Formative research in the production of television for children. In D. R. Olsen (ed.) Media and symbols: The forms of expression, communication, and education. 73rd NSSE Yearbook, N. 1, Chicago: University of Chicago Press, 1974.

Shively, J. E. Evaluation of the technical quality of educational television programs. Educational Technology, 1975, 15 (11), 49-52.

Williams, F. and Stanford, M. C. ITV/ETV evaluation: What we should expect. Educational Technology, 1976, 2 (16), 35-38.

Recommended Reading

Lockman, Saul. What to evaluate in ITV programming. Educational and Industrial Television, 1978, 10(1), 62-64.

Rockman, S. Formative evaluation of self incorporated programs. Bloomington, IN: Agency for Instructional Television, 1976.

Lesser, Gerald. Children and television: Lessons from Sesame Street. New York: Random House, 1974.